

REMARKS/ARGUMENTS

In response to the Office Action mailed November 23, 2005, Applicants amend their application and request reconsideration. No claims are added or cancelled in this Amendment so that claims 1-7 remain pending.

Information Disclosure Statement

An Information Disclosure Statement is being filed simultaneously with this patent application. In a co-pending, commonly assigned, patent application, filed simultaneously, namely Application Number 09/840,440, the Examiner raised questions concerning a copy of a published article referred to at page 4 of that patent application and also referred to at page 4 of the present patent application. The same document was submitted in the present patent application. The existence of more than one version of that document has been discovered and the published version may be different from the version that was supplied in the present patent application.

In order that the disclosure in both patent applications be identical, Applicants are submitting three publications in the Information Disclosure Statement filed here that were also submitted in the other patent application. The first of those publications is the paper referred to at page 4 of present patent application in the form that was published. It is noted that the conference presentation for which that publication was prepared took place less than one year before the filing date of the present patent application.

Finally, in furtherance of disclosure regarding the existence of two forms of that publication, the following paragraphs, substantially taken from the submission in the other U.S. patent application, are supplied.

It is apparent by comparing the document previously submitted indicating sole authorship by Dr. Li and with the title "Advanced Computing Technology for Integrated Design of Textiles and Apparel" to the document appearing in the published Proceedings identifying Dr. Li as one of four authors and entitled "Integrated CAD for Functional Textiles and Apparel", that the documents are substantially similar in content. Dr. Li explains the difference in title, authorship, and content between these two documents,

based solely on recollection, resulted because there was no intention originally to publish the Proceedings of the conference. It was, after all, the first such European conference, although others have followed.

According to Dr. Li, the paper she provided to her patent attorney in Hong Kong in connection with the preparation of the present patent application, and which is referred to on page 4 of the patent application and which was previously submitted to the Examiner, is the draft of a paper sent to the conference and presented at the conference. At a later time, after conclusion of the conference, the conference organizers decided to publish a conference Proceedings and asked the presenters at the conference to revise and submit the initially submitted papers for publication. It is Dr. Li's recollection that more than one year passed following the conference before the conference Proceedings were published. At the time of the filing of the present patent application, which is not based upon any previously filed foreign patent application and which was prepared under urgent circumstances to perfect the filing within one year of the conference presentation, that draft was incorporated by reference in the patent application. It is Dr. Li's belief that, at the time of the preparation of the patent application, the conference Proceedings were not yet available.

Dr. Li advises that it is not unusual in academic circles to revise a conference paper for formal publication or to change authorship at the time of the preparation of the formal published document. It is apparent that the basic information in the two forms of the paper is substantially the same. While the foregoing information represents Dr. Li's best recollection as to what occurred, unfortunately, the events occurred some four or five years ago and correspondence regarding the conference, the paper presented, and the ultimate published form of the paper, is no longer available.

The Amended Claims

In view of the comments in the Office Action mailed November 23, 2005, the independent claims are amended and, where appropriate, the dependent claims are amended to agree with the amended independent claims. The Examiner commented that the final words of the independent claims indicate only an intended use that could be

given no consideration in examining the claims. The ends of each of independent claims 1 and 6 have been revised to describe the positive step of the claimed method, namely visualizing the thermal functional performance of the designs of articles of clothing.

The claimed method, particularly as illustrated by the embodiment of the flowchart shown in Figure 2 of the patent application, includes two important groups of steps. In the first group, an apparel pattern computer aided design function is used to create or to receive new designs of articles of clothing that are input to the computer. These patterns are stored in a pattern database. The information stored is retrieved and used with information concerning the human body that is stored in the body database illustrated in Figure 2. This retrieved information is used in conjunction with a database relating to fitting of an article of clothing on a person and appearing as the on-body database in Figure 2. The result, in the on-body fitting/sewing block of Figure 2, is a simulated, i.e. digitized, human body model clothed with an article of clothing according to the selected design.

This digitized human body simulation is passed on to the second part of the flowchart of Figure 2. In that part of the flowchart, the design is analyzed for thermal functional performance based upon thermal and physiological characteristics of the human body as well as the thermal characteristics of the textile from which the article of clothing is made. In this analysis, visual images are generated in one or more dimensions and these images are displayed on a monitor so that the thermal functional performance of the selected article of clothing can be visualized.

Prior Art Rejections

The rejection of claims 1-5 as unpatentable over two non-patent publications, characterized by the Examiner as Huizenga_1 and Huizenga_2, was maintained. This rejection is again respectfully traversed.

Reliance was again placed upon Huizenga_1 as describing a method of creating thermal functional designs of clothing. The pending claims are directed to a method of creating thermal functional designs of articles of clothing. There is no similar disclosure in Huizenga_1. What is described there is the use of existing models of human beings

used in determining the thermal condition of a human being. Only one of those two models has anything to do with textiles and that limited disclosure concerns including, in that particular model, “a clothing layer” on a mannequin. The existence of this clothing layer, as made clear in Huizenga_1, is to approximate some thermal insulation that might be provided by a layer of cloth. Every person knows that the thermal effect of an article of clothing depends on the construction, i.e., design, of that article of clothing, not merely the fabric. The single insulating fabric layer of Huizenga_1 does not come close to considering all of the thermal effects of an article of clothing.

Moreover, there is no description of any particular article of clothing nor of evaluating thermal functional performance of any particular article of clothing, in Huizenga_1. No consideration is given, for example, as to whether the layer of cloth in Huizenga_1 might be underwear, an outer coat, a sweater, or another like article of clothing. There is simply no specialization or focus on any particular article of clothing, only the existence of a layer of thermal insulation, that might not even be cloth or a textile material, in Huizenga_1. This failing of Huizenga_1 is made clear by amended claim 1 which describes supplying designs of articles of clothing and storing those designs for articles of clothing in a pattern database for later reference. Nothing similar appears in Huizenga_1.

There is no allegation within the Office Action that Huizenga_1 describes retrieving from a database thermal characteristic information with respect to textile materials that may be employed in constructing an article of clothing. In an attempt to supply a database of thermal characteristics of respective textile materials, reliance was placed upon a single sentence in Huizenga_1 referring to a “moisture model”. It is sufficient to point out that calculation of “the amount of moisture that a specific fabric will absorb at a given relative humidity” is not a thermal characteristic of a textile material.

Huizenga_2 was relied upon as “producing a visual image of the heat characteristics of segments...of the body”, apparently referring to the mannequin model of a human being. The Office Action points out that in the described model temperature data is visually represented by colors. Applicants again respectfully point out that Figure

8 in Huizenga_2, to which attention was directed, may be a visualization of a human being and temperature distribution across the human being. However, that visualization provides no information concerning the particular effect of an article of clothing on that distribution. In other words, that depiction fails to visualize thermal functional performance of any article of clothing.

Moreover, Huizenga_2, like Huizenga_1, does not describe retrieving from a database thermal characteristics of particular textile materials from which an article of clothing worn by the mannequin is made.

In summary, no combination of Huizenga_1 and Huizenga_2 can establish obviousness of claim 1 because important features of the method of claim 1 are missing from both of those publications. Neither publication concerns designing articles of clothing, neither publication describes supplying a computer with thermal characteristics of respective textile materials from which articles of clothing are made, and neither publication describes creating visual images of the thermal functional performance of articles of clothing, only images of persons and temperature distributions of the persons. Those temperature distributions may be calculated taking into account the thermal properties of a layer of clothing, but the temperature distributions are clearly not adjusted for designs of particular articles of clothing. Accordingly, upon reconsideration, the rejection of claims 1-5 should be withdrawn. Further discussion is not provided nor necessary with respect to the rejection of dependent claims 2-5 since claim 1 is patentable over the prior art applied.

Claims 6 and 7 were newly added in the previous response. Those claims were rejected as unpatentable over Huizenga_1 in view of Huizenga_2 and further in view of Zhu et al. (U.S. Patent 6,584,465, hereinafter Zhu). This rejection is respectfully traversed.

Zhu is totally unrelated to articles of clothing or retrieving patterns of articles of clothing. Consider that Zhu is assigned to Eastman Kodak and that the patterns referred to in the cited sections of Zhu concern wallpapers, fabrics, textiles, floor mats, tile, rugs, etc. Clearly, while Zhu is directed to printed patterns having various outlines, these kinds of patterns are entirely different from a pattern of an article of clothing. At best, the

relationship between these two different kinds of patterns might be of some interest to a person manufacturing an article of clothing. That person selects a textile fabric with a particular pattern, i.e., a pattern of the type of pattern contemplated by Zhu, and subsequently purchases a paper pattern, i.e., a pattern of the type contemplated by the invention, showing the various parts of the article of clothing to be cut out and assembled in producing that article of clothing. Zhu's reference to patterns is out of context with reference to the invention.

In fact, Zhu has nothing to do with the invention except that it uses the word "pattern" in a context different from the invention. Zhu is not even analogous prior art because it is neither within the field of the present invention nor directed to resolving the problem resolved in the invention. See MPEP 2141.01(a). Since Zhu is not analogous art, it cannot be applied in an obviousness rejection of any claim pending in the present patent application. On that ground alone, the rejection of claims 6 and 7 cannot be properly maintained.

The subject matter of independent claim 6 is similar in numerous ways to the subject matter of independent claim 1. To the extent Huizenga_1 and Huizenga_2 are cited for the same propositions in the rejection of claim 6 as in the rejection of claim 1, the same arguments against the rejection of claim 1 are submitted against the rejection of claim 6 without being repeated at length. Neither Huizenga_1 nor Huizenga_2 concerns the design of articles of clothing, neither is specific to evaluating the thermal performance of particular articles of clothing, and neither publication includes consultation with a database containing thermal characteristics of respective textile materials from which articles of clothing are made. The failure of Huizenga to describe providing designs of particular articles of clothing is acknowledged by the citation, in the rejection of claim 6, of Zhu. Zhu is asserted to teach "the extraction of clothing patterns from a pattern database". However, while Zhu may mention and concern fabric patterns, Zhu does not concern patterns of articles of clothing. Thus, Zhu, if it were analogous art, could not supply the elements of claims 6 and 7 that are missing from Huizenga_1 and Huizenga_2. The rejection is plainly erroneous and should be withdrawn.

Reconsideration and withdrawal of the prior art rejection with respect to all of claims 1-7 are earnestly solicited.

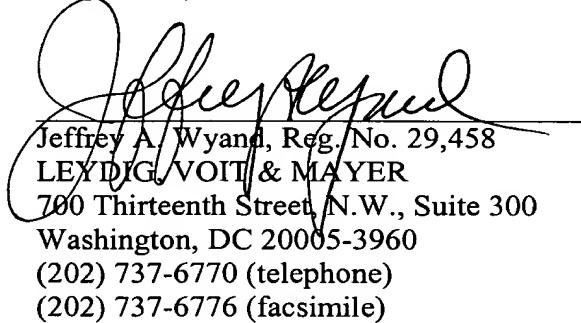
Double Patenting Rejection

The Examiner maintained the double patenting rejection based upon the claims of co-pending commonly assigned U.S. Patent Application 09/840,444. Since no claim has yet been identified as allowable in either this patent application or the other patent application, the rejection is merely provisional. Applicants confirm that a Terminal Disclaimer will be filed in the present patent application upon the identification of an allowable claim in either of the two patent applications.

Summary

Consideration of the documents supplied with the concurrently filed Information Disclosure Statement and reconsideration and withdrawal of the prior art rejections of the pending claims are respectfully requested.

Respectfully submitted,


Jeffrey A. Wyand, Reg. No. 29,458
LEYDIG VOIT & MAYER
700 Thirteenth Street, N.W., Suite 300
Washington, DC 20005-3960
(202) 737-6770 (telephone)
(202) 737-6776 (facsimile)

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